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BORISOV, Viktor Gavrilovich; BERG, A.I.; DZHIGIT, I.S.; YELIN, O.G.,
KULIKOVSKIY, A.A.; MOZHZHEVELOV, B.N.; SMIRNOV, A.D.; TARASOV,
F.I.; TRAMM, B.F.; CHECHIK, P.O.; SHAMSHUR, V.I.; MALININ, R.M.
redaktor; VORONIN, K.P., tekhnicheskiy redaktor

[Young radio amateur] Iunyi radioliubitel'. Izd. 2-oe, ispr. 1
dop. Moskva, Gos.energ.izd-vo 1955. 271 p. (Massovaya radio-
biblioteka, no.224) (MLRA 8:11)
(Radio-Amateurs' manuals)

YELIN, R.

Increasing the wear resistance of machine parts. Mor. flot 21
no.8:35 Ag '61. (MIRA 14:9)

1. Nachal'nik tsentral'noy laboratorii Odesskogo sudoremontnogo
zavoda No.1.
(Marine engineering) (Case hardening)

35077

S/032/62/028/004/009/026
B101/B138

1.8000

AUTHORS: Yelin, R. M., Khanonkin, A. A., and Kharin, G. G.

TITLE: Ultrasonic inspection of welds by a parallel two-probe detector

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 4, 1962, 464-465

TEXT: Fabricated hull sections composed of 7 - 15 mm steel plates were tested with a УДА-7М (UZD-7N) double-probe flaw detector and the results were compared with those of x-ray and gamma ray detectors. The double-probe flaw detector proved less sensitive than a one-probe unit owing to interference effects and energy losses. Nevertheless it can be used for welding inspections if the "noise cut-out" 1 "amplification" settings are used. Its sensitivity is then 3% plate thickness, which is midway between the x-ray and gamma-ray values. The advantage of the double-probe flaw detector is that the acoustic contact of the probes can be checked continuously and that oscillograms can be deciphered more easily than those of the one-probe unit. It is recommended for testing thin butt welds, where

X

Card 1/2

Ultrasonic inspection of welds... S/032/62/026/004/009/026
B101/B138

automated inspection is difficult. There are 1 figure and 2 Soviet references.

ASSOCIATION: Odesskiy sudoremontnyy zavod (Odessa Ship Repair Shop)

Card 2/2

YELIN, S.N.

Device for increasing the mobility of loose materials in warehouses.
Gor.zhur. no.6:74-75 Je '57. (MIRA 10:8)

1. Nachal'nik konstruktorskogo otdela kombinata "Apatit."
(Materials handling)

YELIN, S N

127-58-5-8/30

AUTHORS: Yelin, S.M., Chief of the Designing Section of the Apatit Combine; Svinin, S.P., Technical Director of an Open Pit of the Mine imeni Kirov; Zykov, V.A., Chief Mechanic of the Apatit Combine

TITLE: Derricks With "Sunk" Drilling Machines for Open Mining (Burovyie stanki s pogruzhnym perforatorom dlya otkrytykh rabot). At the Apatite Mine imeni Kirov (Na apatitovom rudnike imeni Kirov)

PERIODICAL: Gornyy Zhurnal, 1958, Nr 5, pp 28-30 (USSR)

ABSTRACT: A derrick with a "sunk" drilling machine was designed by the authors and manufactured in 1956 in the repair-mechanical plant of the Apatit Combine. Technical characteristics are as follows: diameter of bore holes - 150 mm; depth of drilling - 20 m; derrick height - 8,700 m; width - 2,700 mm; length - 7,000 mm; electric motor power - 4.5 kw; the sunk drilling machine is of the BMK-2 type and operates by compressed air at 5 atm pressure. This device was tested in an open pit of the mine imeni Kirov, which mines the western part of the apatite-nepheline ores of 8 to 9 hard-

Card 1/2

127-58-5-8/30

Derricks With "Sunk" Drilling Machines for Open Mining. At the Apatite Mine imeni Kirov

ness (by Professor Protod'yakonov scale). Drilling speed was 3 to 3.5 m per hour. The machine proved to have considerable advantages in comparison with percussion-cable drilling machines, since it can drill 20 to 25 m of shot-holes of 150 mm in diameter per shift, whereas percussion-cable drilling machines have an average shift capacity of only 3 to 5 m of 200-mm shot-holes. The new device is simple and safe in operation and can be handled by one worker.

There are 4 figures.

ASSOCIATION: Apatit Combine

AVAILABLE: Library of Congress

Card 2/2

1. Drilling machines-Design

abstract
GUSHCHIN, V.V.; YELIN, S.N.; STEKHOVSKIY, A.V.; ABRAMOV, V.F., kand.
tekhn.nauk

New technical methods and equipment for underground mining in
apatite mines. Gor.zhur. no.1:35-40 Ja '63. (MIRA 16:1)

1. Kombinat "Apatit" (for Gushchin, Yelin, Stekhovskiy).
2. Gosudarstvennyy institut gorno-khimicheskogo syr'ya (for
Abramov).

(Apatite)

(Mining engineering)

YEI,IN, S.N.; SERGEYENKO, L.A.

Modernizing the industrial equipment at an apatite-nephelite
mineral dressing plant. Obog. rud. 8 no.3:45-47 '63.
(MIRA 17:1)

GRACHEV, F.G., kand. tekhn. nauk; SMIRNOV, V.A., gornyy inzh.; YELIN,
S.N., gornyy inzh.; SUKHODREV, V.M., gornyy inzh.; TOROCHKOV,
G.S., gornyy inzh.

Using the BSSh-1 roller bit boring machine in apatite strip
mines. Gor. zhur. no.8:37-39 Ag '64.

(MIRA 17:10)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut
gornokhimicheskogo syr'ya (for Grachev, Smirnov). 2. Kombinat
"Apatit" (for Yelin, Sukhodrev, Torochkov).

AFANAS'YEV, T.P.; GASHICHEV, V.I.; YELIN, S.N.; KAPLYANSKIY, B.A.;
LAVROVA, G.I.

Automation of crushing and grinding processes at the No.1
Apatite-Nephelite Ore Dressing Plant. Obog. rud 9 no.4:
36-41 '64. (MIRA 18:5)

YELIN, S.N., inzh.

Introduction of automation in the "Apatit" Combine.
Gor. zhur. no.10:22-26 0 '65. (MIFA 18:11)

PERMYAKOV, R.S., kand. tekhn. nauk; YELIN, S.K.

Building the "Tsentral'naya" mine of the S.M. Kirov "Apatit"
Combine. Shakht. stroit. 9 no. 6: 18-22 de '65.

(MIRA 18:7)

1. Glavnyy inzh. kombinata "Apatit" (for Permyakov).
2. Zamostitel' direktora po stroitel'stvu kombinata
"Apatit" (for Yelin).

YELIN, V., podpolkovnik zapasa

In order to consult with Il'ich more often... Komm. Vooruzh.
S11 46 no.11:62-65 Je '65. (MIRA 18:6)

1. Zamestitel' nachal'nika biblioteki TSentral'nogo doma
Sovetskoy Armii imeni M.V. Frunze, Moskva.

YELIN, V.A., inzh.

Replacement of air preheater casings of the BEZ-75/34 boiler. Elek.
sta. 36 no.8:75-76 Ag '55. (MIRA 12:8)

YELIN, VLADIMIR IVANOVICH

DECEASED
c1960

1961/11

SEE ILC

PETROLEUM INDUSTRY /PUMPS AND COMPRESSORS

SEVERDENKO, V.P.; YELIN, V.I.

Kinetics of the deformation of armco iron. Sbor. nauch. trud.
Fiz.-tekhn. inst. AN BSSR no. 7:30-37 '61. (MIRA 15:7)
(Iron--Metallography) (Deformations (Mechanics))

TITLE. Generation and propagation of cracks ,
by SSSR. Doklady. v. 158, no. 6, 1964, 1310-1313

Card 1/3

"APPROVED FOR RELEASE: 09/01/2001

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CIA-RDP86-00513R001962520019-6"

SOURCE CODE: UR/0000/55/000/000/0293/047

ACC NR: AT6036709

(A)

AUTHOR: Severdenko, V. P. (Academician AN BSSR); Tochitskiy, E. I.; Yelin, V. I.

ORG: none

TITLE: Increasing metal strength by reinforcement with microwire

SOURCE: AN BSSR. Fiziko-tekhnicheskiy institut. Plastichnost' i obrabotka metallov davleniyem (Plasticity and metalworking by pressure). Minsk, Nauka i tekhnika, 1966, 293-297

TOPIC TAGS: metal strengthening, dispersion strengthening, dispersion strengthened metal property, metal composite, metal composite property, microwire, nichrome alloy, tin

ABSTRACT: A series of specimens of commercial-grade tin reinforced with nichrome wire 0.1 mm in diameter were subjected to tensile tests. The specimens with wires oriented across the direction of the load had a strength lower than that of pure tin. However, specimens with wires oriented along the direction of the load had a strength 49 to 83% higher than that of pure tin, depending on the number of wires per mm of specimen area. The increase in strength was somewhat higher than the mean strength of nichrome wires and tin matrix. Orig. art. has: 2 tables.

SUB CODE: 11, 13/ SUBM DATE: 08Jul66/ ORIG REF: 002/ ATD PRESS: 5108

Cord 1/1

ACC NR: AT6036707

SOURCE CODE: UR/0000/66/000/000/0242/0246

AUTHOR: Severdenko, V. P. (Academician AN BSSR); Klubovich, V. V.; Yelin, V. I.

ORG: none

TITLE: A study of the stretching of copper in an ultrasonic field at high temperatures

SOURCE: AN BSSR. Fiziko-tekhnicheskii institut. Plastichnost' i obrabotka metallov davleniyem (Plasticity and metalworking by pressure). Minsk, Nauka i tekhnika, 1966, 242-246

TOPIC TAGS: copper, ultrasonic oscillation, high temperature, temperature dependence, ultrasonic field, tensile strength, plastic deformation, microhardness

ABSTRACT: Copper tensile specimens of 6 mm diameter and 36 mm length were vacuum annealed at 650°C and tested in tension at 100-700°C, with and without an ultrasonic field. The resonance frequency of the PMS-7 magnetostrictive transducer was 20 kc. Specimens were held for 25 min at temperature before testing at a constant deformation rate of 20 mm/min. Load-elongation curves at 20 and 600°C showed that ultrasonic oscillations lowered the strength and plasticity of the copper. In an ultrasonic field with an oscillation amplitude of 0.012 mm the static load decreased by 50 and 45% and the elongation by 35 and 25%, respectively, at 20 and 600°C. At an amplitude of 0.018 mm the load decreased more than 70% and the elongation 40%. Natural stress-strain dia-

Card 1/2

ACC NR: AT6036707

grams are given for different temperatures, and the ultimate tensile strength and relative elongation are given as functions of temperature. At higher temperatures, the natural stress and strain decreased, while with superimposed ultrasonic oscillations they decreased even further. Ultrasonic oscillations decreased the natural stress and the ultimate tensile strength by 40-50%, and the relative elongation by 20-35%. At 600°C, the ultimate tensile strength without ultrasonics was equal to the ultimate tensile strength at 100°C with an ultrasonic field superimposed. Microhardnesses in the tensile fracture zone were higher when the ultrasonic field was absent. Also, the etchability of grain boundaries was greater in samples deformed in an ultrasonic field. It was concluded that ultrasonic oscillations intensified dislocation mobility and general diffusion processes, facilitating plastic deformation. Orig. art. has: 2 figures, 1 table.

SUB CODE: 11/

SUBM DATE: 08Jul66/

ORIG REF: 003/

OTH REF: 002

Card- 2/2

YELIN, V.L.

Agar-agar from the seaweed *Phyllophora rubens*. V.L. Yelin, R. Grigorova and G. Flabert. *Byull. Nauch. Issledovaniy Khim.-Farm. Inst.* 1931, 140-1. The dried *Phyllophora rubens* found in the Black Sea has the following composition: ash 20, H₂O 12, C 30, H 5, N 2.5% and balance S and O. It contains about 15% of albumen which has a S content of 0.5%. It contains also some quantities of I. The authors developed a method (not disclosed) whereby a yield of 20-25% of dry agar-agar is obtained from the dry plant. Its properties are identical with those of other com. brands. It m. 90-92° and has a cooling point of 40-42° (?). A jelly is obtained from 6 parts of agar-agar in 100 parts H₂O.

ASH-11A METALLURGICAL LITERATURE CLASSIFICATION

ELIN, V. L.

co

Extraction of iodine from sea weeds. V. ELIN with P. GRABKOVA. *Khim. Farm. Prom.* 1932, 3(3): 1. — From seaweeds 98-100% of the I can be extd. by boiling in an autoclave at 4-6 atm. I.M. NABABEVICH

18

APPROVED FOR RELEASE: 09/01/2001

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YELIN, V.L.																																																				
PROCESSING AND PROPERTIES INDEX																																																				
<p>Iodine from seaweeds. V. Elin and E. Driker. <i>Khim. Farm. Prom.</i> 1933, 283-4.—The I in the liquor obtained by direct treatment of weeds in the autoclave is in an inorg. combination. If the liquor is boiled with $H_2SO_4 + NaNO_3$ and extd. with CS_2, all the I is recovered, while kerosene exts. only 87%. Methods used for the extn. of I from the ash may be applied to the autoclave liquor, with much higher yields. L. Nasarevich</p>																																																				
<p>ASH-SEA METALLURGICAL LITERATURE CLASSIFICATION</p>																																																				
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CA
YELIN, V. L.

The variability of intestinal bacilli under the influence of animal passage. I. V. L. Yelin and O. P. Rosenthal. *Z. Microbiol. Epidemiol. Immuninfektforsch.* (U. S. S. R.) 16, 670-8 (in German 678) (1936).—The passage of *Es. coli communis* through animal organisms by means of paper tubes impregnated with the culture and sewed into the intestinal tract led to a splitting of the original strains into *S*, *R* and intermediate forms, the extreme *R* forms having almost no biochemical activity while the intermediate forms reacted to some extent like the pathogenic forms of the intestinal typhus group. The extreme *R* forms gave irregular colonies or radial stripes, did not decompose glucose, lactose, maltose or mannitol, did not curdle milk nor reduce neutral red, and gave colorless colonies in colored media. The intermediate forms reacted as follows: a form, which decompd. glucose and mannitol with acid formation but without gas formation, did not reduce neutral red nor curdle milk and resembled typhoid bacilli; b form, which decompd. glucose with acid but no gas formation, did not decompose lactose, maltose or mannitol, did not reduce neutral red nor curdle milk and resembled the dysentery bacilli of Shiga; c form, which decompd. glucose and mannitol with acid and gas formation, did not decompose lactose, did not reduce neutral red nor curdle milk and resembled the paratyphus bacilli. However, none of these variants had a specific serological action. The variants were formed not later than 3 days after the introduction of the original strain into the animal organisms, and the length of time the strain remained in the organism had no effect on the different variants. The same type of splitting into *S*, *R* and intermediate forms was found to occur in many animals and even in birds, but not in cold-blooded animals since the body temp. in these cases was too low to sustain the growth of the intestinal bacilli of warm-blooded animals. The *R* and intermediate forms are not stable. In the course of further development there is a gradual shift through the intermediate forms to the original strain, with subsequent recovery of the original characteristics of the strains.

YELIN, V.L.

CE

The content of glycogen in the organs and blood of normal, sensitized and shocked guinea pigs. (The mechanism of anaphylactic shock). V. Elin. *J. Physiol.* (U. S. S. R.) 24, 921-6 (in French, 1933) (1938). — The sensitization of guinea pigs with horse serum causes an increase of glycogen in the liver and muscles. During anaphylactic shock a sharp drop of glycogen in these organs and an increase in the blood were observed. This transfer of glycogen takes place in the form of colloidal particles of a definite size. The injection of 0.2 g. of glycogen in 1-1.5 cc. of physiol. saline soln. results in anaphylactic shock, while if 4-5 cc. is used no shock is obtained. In no case was there an appreciable increase in the glycogen of the blood and organs after injection. S. A. Karjala

ASIS-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS										PROCESSES AND PROPERTIES INDEX										100 AND 4TH ORDERS									
CA YELIN, V.L.										Mechanism of sulfonamide preparations in the organism. V. L. Elia. <i>Zhar. Mikrobiol., Epidemiol. Immunobiol.</i> 1947, No. 4, 70-76.—Sulfathiazole seems to have a direct action on meningococci in mice. In dilns. 1:1000 to 1:10,000 sulfathiazole has bactericidal, bacteriostatic and "evolutionary" activity. Phagocytosis was not stimu- lated nor was the sensitivity of the organism to the infec- tion reduced. H. L. Williams										IIC									
ADD. ILL. METALLURGICAL LITERATURE CLASSIFICATION										10000 100000 1000000										10000 100000 1000000									
10000 100000 1000000										10000 100000 1000000										10000 100000 1000000									

YELIN, V. L.

USSR/Medicine - Modification of Micro-organisms; Dysentery
Nov 53

"Data on Flexner Dysentery Bacilli Contained in Filter Paper Tubes Which Had Been Sewn Into the Peritoneum of Rabbits and Left There for a Long Time," V. L. Yelin, F. Ya. Satanovskaya, Chair of Microbiol., Irkutsk Med Inst

Zhur Mikro, Epid, 1 Immun, No 11, pp 33-36

Cultivation of Flexner W dysentery bacilli (I) in the rabbit for period of 20, 30, 36, and 45 days did not result in disappearance of the culture. On the other hand, there was modification of I

271T40

into the finest granular forms (II). The serum of the rabbits contained a large quantity of agglutinins, while the tubes of filter paper contg I were filled with leukocytes. They also contained a minor quantity of the R-forms (III). Cultures of I were avirulent and did not agglutinate, while cultures of III were weakly agglutinated by polyvalent serum and not at all by type sera. Under the effect of leukocytes and antibodies, transformation of I into II took place.

271T40

YELIN, V.I.; ZHDANOV, V.M., redaktor; SACHKVA, A.I., tekhnicheskii redaktor.

[Variability of microorganisms] Izmenchivost' mikrobov. Moskva, Gos. izd-vo med. lit-ry, 1954. 210 p.
(Microorganisms) (Variation (Biology)) (MLRA 7:11)

YELIN, V.L.; OSTROVSKAYA, L.P.

Are antibacterial antibodies capable in themselves of destroying
germs in the actively immunized body? Zhur.mikrobiol.epid. i immun.,
supplement for 1956:5 '57 (MIRA 11:3)

1. Iz Khar'kovskogo instituta vaktsin i syvorotok imeni Mechnikova i
kafedry mikrobiologii Irkutskogo meditsinskogo instituta.
(BACTERIOLYSIS) (ANTIGENS AND ANTIBODIES)

YELIN, V.L., prof.

Development of Soviet public health in Odessa; from recollections of
contemporaries. Sov.zdrav. 16 no.11:48-52 H '57. (MIRA 11:1)
(PUBLIC HEALTH
in Russia (Rus))

YELIN, V. L.

USSR / Microbiology. General Microbiology. Physiol- F-1
ogy and Biochemistry.

Abs Jour: Ref Zhur-Biol., No 16, 1958, 71915.

Author : Yelin, V. L.; Vasyurenko, K. G.

Inst : Not given.

Title : Growth of Heterotrophic Bacteria in a Medium
Without Organic Substances.

Orig Pub: Mikrobiol. zh., 1957, 19, No 2, 11-13.

Abstract: A suspension of Bacterium coli commune, Bact.
pyocyaneum, and Bact. proteus vulgaris was
poured into test tubes with a Vinogradskiy ni-
trification medium which contained no organic
substances. After incubation at 37° in an at-
mosphere deprived of CO₂, a seeding was made of
the test tubes' contents on nutrient agar plates
and the number of colonies raised was counted.

Card 1/2

Khar'kov Inst Vaccines + Sera

USSR / Microbiology. General Microbiology. Physiology and Biochemistry. F-1

Abs Jour: Ref Zhur-Biol., No 16, 1958, 71915.

Abstract: An increase in the number of cells was established in comparison with those entered in Vinogradskiy's medium; in addition, no oxidation of ammonia was observed with nitrites and nitrates. The increase in the number of cells also took place with the exclusion of ammonium sulfate from Vinogradskiy's medium. The conclusion is made that under test conditions the above-mentioned bacteria obtain the carbon and energy required by them from volatile organic substances in the air. -- V. Kalakutskiy.

Card 2/2

YELIN, V.L.

Biology of Escherichia coli [with summary in English]. Mikrobiologiya
26 no.1:17-21 Ja-F '57. (MLRA 10:6)

1. Irkutskiy meditsinskiy institut.
(ESCHERICHIA COLI,
biol. (Rus))

YRLIN, V.L.; VASYURENKO, K.I.

Assimilation of organic substances from the air by heterophilic bacteria as a sole source of carbon and energy [with summary in English]. Mikrobiologiya 27 no.6:709-713 N-D '58.

(MIRA 12:1)

1. Khar'kovskiy institut imeni I.I. Mechnikova.

(BACTERIA,

assimilation by heterophilic bact. of organic substances from air as only source of carbon (Rus))

(CARBON,metab.

same)

YELIN, V.L. [IELin, V.L.]; OVCHARENKO, O.I.; RUMYANTSEVA, I.V.

Can Nitrosomonas assimilate organic matter from the air?
Mikrobiol. zhur, 22 no. 5:1-5 '60. (MIRA 13:10)

1. Khar'kovskiy institut vaktsin i syvorotok.
(NITROSOMONAS)

YELIN, Vladimir Leot'yevich, prof.; RICHENKO, N.I., red.; CHUCHUPAK,
V.D., tekhn. red.

[General problems of infectious and immune processes] Obshchie
voprosy infektsionnogo i immunnogo protsessov. Kiev, Gosmedizdat
USSR, 1961. 216 p. (MIRA 15:6)
(IMMUNITY) (INFECTION)

MIKHEYEV, V.P.; MEDNIKOV, Yu.P.; YELIN, Yo.F.

Plant testing of flat multinozzle injector gas burners.

Gaz. prom. 10 no.7:18-21 '65.

(MIRA 18:8)

YELIN, Ye.Ya., kand.sel'skokhozyaystvennykh nauk, dotsent

Mapping natural vegetation when compiling soil maps for collective
and state farms. Nauch trudy UASHN 10:181-187 '60. (MIRA 14:3)
(Phytogeography--Maps) (Soils--Maps)

DOBRYNIN, V.P., prof.; OL'SHANSKIY, M.A., akademik, lektor; YELIN, Ye.Ya.,
dots.; FAT'YANOV, A.S., prof.; GUBAREV, A.N.; TKACHENKO, P.I.,
dots.; CHIZHEVSKIY, M.G., prof., lektor; AVDONIN, N.S., prof.,
lektor; ONUCHAK, A.I., dots.; DUNIN, M.S., prof., lektor; SAVZDARG,
E.E., prof., lektor; KREMENETSKIY, N.D., dots., lektor; AVER'YANOV,
S.F., dots., lektor; POLUBOYARINOV, I.I., dots.; GUBAREV, A.N., red.
izd-va; NAUMOV, K.M., tekhn. red.

[Textbook on agriculture for party schools] Uchebnoe posobie po sel'-
skomu khoziaistvu dlia partiinykh shkol. Moskva. Pt.1. [Crop farm-
ing] Zemledelie. 1958. 397 p. (MIRA 15:1)

1. Kommunisticheskaya partiya Sovetskogo Soyuza. Vysshaya partiynaya shkola pri Tsentral'nom komitete Kommunisticheskoy partii Sovetskogo Soyuza (for Dobrynin, Ol'shanskiy, Gubarev, Tkachenko, Chizhevskiy, Avdonin, Onuchak, Dunin, Savzdarg, Kremenetskiy, Aver'yanov).
2. Vysshaya partiynaya shkola pri Tsentral'nom komitete Kommunisticheskoy partii Sovetskogo Soyuza (for Dobrynin, Ol'shanskiy, Gubarev, Tkachenko, Chizhevskiy, Avdonin, Onuchak, Dunin, Savzdarg, Kremenetskiy, Aver'yanov).
3. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Ol'shanskiy).
4. Vysshaya partiynaya shkola pri Tsentral'nom komitete Kommunisticheskoy partii Ukrainy (for Yelin, Poluboyarinov).
5. Gor'kovskaya Vysshaya partiynaya shkola (for Fat'yanov).

(Agriculture)

YELIN, Yu.Ya. [IELin, IU.IA.], dotsent; GRIGORA, I.M. [Hryhora, I.M.],
assistant

Natural forage lands on floodlands of the upper Zbruch River and
ways for their improvement. Nauk. pratsi UASHN 17 no.12:93-99 '60.
(MIRA 16:7)

(Zbruch Valley—Pastures and meadows)

ANESTHETICS OF THE NAPHTHALENE SERIES. IV. Derivatives of 1-naphthaleneacrylic acid. S. I. Bergovskaya and A. S. Elina. J. Gen. Chem. (U. S. S. R.) 13, 864-7 (1944) (English summary); cf. C. A. 35, 400K. -- 1-C ₁₀ H ₇ CHO (49.2 g.), 49.2 g. malonic acid and 100 cc. AcOH were heated with stirring for 12 hrs. at 85-90° to yield 60 g. (1-naphthylmethyl)malonic acid, m. 195-6°, which decarboxylates at 215° to yield 40 g. (1-naphthaleneacrylic acid (I), m. 200-10° (from EtOH). The above, esterified with EtOH in the presence of H ₂ SO ₄ , gave the Et ester, m. 37.5-8° (from EtOH). The latter, hydrogenated with Raney Ni at room temp. and atm. pressure gave Et 1-naphthaleneacrylate, b _p 191-2°. I heated with SOCl ₂ yielded the corresponding chloride which with 25% NH ₄ OH gave 1-naphthaleneacrylamide, m. 175° (from EtOH), while Me ₂ NCH ₂ CH ₂ OH gave 1-C ₁₀ H ₇ CH:CHCO ₂ CH ₂ CH ₂ NMe ₂ , isolated as the HCl salt, m. 185.5-6° (from EtOH), and Et ₃ NCH ₂ CH ₂ OH gave the corresponding diethylammonium salt, also isolated as the HCl salt, m. 174-5° (from EtOH). The acid chloride treated with Me ₂ NCH ₂ CHMeCH(OH)Me in benzene gave the HCl salt of 3-dimethylamino-1,3-dimethylpropyl 1-naphthaleneacrylate, m. 185.5-6° (from CCl ₄ and dichloroethane). The above esters have a rather weak anesthetizing action and cause irritation of the mucous membranes. O. M. K.																									
<p>10</p> <p>ANESTHETICS OF THE NAPHTHALENE SERIES. IV. Derivatives of 1-naphthaleneacrylic acid. S. I. Bergovskaya and A. S. Elina. J. Gen. Chem. (U. S. S. R.) 13, 864-7 (1944) (English summary); cf. C. A. 35, 400K. -- 1-C₁₀H₇CHO (49.2 g.), 49.2 g. malonic acid and 100 cc. AcOH were heated with stirring for 12 hrs. at 85-90° to yield 60 g. (1-naphthylmethyl)malonic acid, m. 195-6°, which decarboxylates at 215° to yield 40 g. (1-naphthaleneacrylic acid (I), m. 200-10° (from EtOH). The above, esterified with EtOH in the presence of H₂SO₄, gave the Et ester, m. 37.5-8° (from EtOH). The latter, hydrogenated with Raney Ni at room temp. and atm. pressure gave Et 1-naphthaleneacrylate, b_p 191-2°. I heated with SOCl₂ yielded the corresponding chloride which with 25% NH₄OH gave 1-naphthaleneacrylamide, m. 175° (from EtOH), while Me₂NCH₂CH₂OH gave 1-C₁₀H₇CH:CHCO₂CH₂CH₂NMe₂, isolated as the HCl salt, m. 185.5-6° (from EtOH), and Et₃NCH₂CH₂OH gave the corresponding diethylammonium salt, also isolated as the HCl salt, m. 174-5° (from EtOH). The acid chloride treated with Me₂NCH₂CHMeCH(OH)Me in benzene gave the HCl salt of 3-dimethylamino-1,3-dimethylpropyl 1-naphthaleneacrylate, m. 185.5-6° (from CCl₄ and dichloroethane). The above esters have a rather weak anesthetizing action and cause irritation of the mucous membranes. O. M. K.</p>																									

SYNOPSIS		PROCESSING AND PROPERTY INDEX	
<p>Asynthesis of the naphthalene series. V. 4-Nitro-1-naphthaleneacrylic acid and its derivatives and esters of 4-amino-1-naphthaleneacrylic acid. S. I. Sergievskaya and A. S. Elina. <i>J. Gen. Chem.</i> (U. S. S. R.) 13, 803-80 (1943) (English summary); cf. C. A. 39, 920^o.—To 70 cc. concd. HNO₃ was added with stirring 10 g. 1-C₁₀H₇CH:CHCO₂H at 20-8°, the mixt. stirred for 2 hrs. and poured into ice water to yield 4-nitro-1-naphthaleneacrylic acid (I) (3.5 g.), m. 274-5° (decompn.; from EtOH).</p> <p>There was also isolated from the mother liquor a nitro-naphthaleneacrylic acid of unknown structure, m. 254-5° (from EtOH); <i>Et ester</i>, m. 105° (from EtOH). I yields the <i>Et ester</i>, m. 85.5-6° (from EtOH), after refluxing with EtOH and a trace of H₂SO₄. To 35 cc. HNO₃ (d. 1.5) was gradually added, with stirring, 5 g. 1-C₁₀H₇CH:CHCO₂H at -2° to 0° and, after stirring for 1 hr. at this temp., the mixt. was poured out to ice to yield 1.8 g. 4,5-dinitro-1-naphthaleneacrylic acid, m. 271° (decompn.; from AcOH); <i>Et ester</i> (by refluxing with EtOH and a trace of H₂SO₄), m. 108° (from EtOH). I (1.3 g.) heated with 4 g. SOCl₂ on a steam bath for 6 hrs. gave the corresponding chloride, m. 148-5-50° (from benzene), which with 20% NH₄OH gave the amide, m. 223-4° (from EtOH). <i>Et ester</i> of I (1.5 g.) in 40 cc. abs. EtOH was treated, at 57-60° with 0.2 cc. concd. HCl, followed by 1 g. Fe filings added over 1 hr. with agitation, after which the mixt. was stirred for 1 hr. at refluxing temp., filtered and concd.; the residue was treated with AcOH to yield AcNHCH₂CH:CHCO₂Et, m. 218-18.5° (from EtOH). The chloride of I and Fe₂NHCH₂CH:CHCO₂H in benzene were heated for 3 hrs.</p>		<p>on a steam bath; the pptd. HCl salt was filtered off, dissolved in H₂O, neutralized, extd. with Et₂O and the ext. concd. and heated on a steam bath <i>in vacuo</i>; after soln. in dry Et₂O and treatment with alc. HCl, there was obtained the HCl salt of 2-diethylaminoethyl 4-amino-1-naphthaleneacrylate, m. 201.5-2° (from EtOH). Reduction of this with Fe-HCl in EtOH gave the <i>Et ester</i> of the corresponding amino deriv.; HCl salt, m. 181.5-4° (from EtOH). Analogously there was prepd. the 1,2-dimethylaminoethyl ester-HCl, m. 186.5-9° (from EtOH), which upon reduction with HCl-Fe in EtOH gave 2-dimethylaminoethyl 4-amino-1-naphthaleneacrylate-HCl, m. 201.3-5° (from 80% EtOH). A soln. of 0.7 g. KOH in 100 cc. EtOH was treated with 2.0 g. I at 60-5°, followed by 3 g. NH₄CH₂CH₂Cl; after stirring for 4 hrs. at 60-5°, the soln. was filtered, concd., heated <i>in vacuo</i> to remove volatiles and taken up in Et₂O; addn. of HCl in EtOH gave 3-diethylaminoethyl 4-amino-1-naphthaleneacrylate-HCl, m. 189.5-20° (from EtOH). This yielded, on reduction with Fe-HCl in EtOH, the corresponding amino deriv.; hydrochloride, m. 196-6.5° (from EtOH). Chloride (1 g.), 20 cc. benzene and 0.5 g. Me₂NCH₂CH₂CH₂OH were heated on a steam bath for 3 hrs. to yield 3-dimethylamino-1,2-dimethylpropyl 4-amino-1-naphthaleneacrylate-HCl, m. 210.5-11.5° (from diethyl ether). The HCl salt of 2-diethylaminoethyl 4-amino-1-naphthaleneacrylate (0.4 g.) in 70 cc. EtOH was hydrogenated in the presence of Raney Ni to yield the HCl salt of 2-diethylaminoethyl 4-amino-1-naphthalenepropionate, m. 185-6° (from EtOH). An analogous procedure was</p>	
<p>ASB-11A METALLURGICAL LITERATURE CLASSIFICATION</p>			

used to obtain the HCl salt of 2-dimethylaminoethyl 4-amino-1-naphthalenepropionate, m. 168.9° (from $EtOH$). 1.10 g., in 150cc. 5% Na_2CO_3 was treated with $KMnO_4$ soln. until a permanent color was established, then with Na_2O until the MnO_2 was dissolved; the soln. was acid. with HCl and the aq. layer on acidification gave 4-nitro-1-naphthoic acid, m. 210.20°; the Et_2O layer on evapn. gave 1 g. 4-nitro-1-naphthaldehyde, m. 161.7°, which, heated with $PhNH_2$ in $EtOH$, gave the corresponding amide, m. 168.8.5° (from $EtOH$); hydrolysis of the amide by 10% HCl gave the original aldehyde, m. 161.9.5°; this is readily oxidized by dil. $KMnO_4$ in Me_2CO to yield 4-nitro-1-naphthoic acid. The 4,5-dinitro-1-naphthaleneacrylic acid is oxidized by CrO_3 in $AcOH$ to yield 4,5-dinitro-1-naphthoic acid, m. 201° (from $EtOH$); its ester, m. 142.5°; the acid heated with quinoline and $Co-Cr$ catalyst for 3 hrs. at reflux temp. gave 1,8-C₁₀H₆(NH_2), m. 170° (from $CHCl_3$). All alkylamino esters of aminonaphthaleneacrylic acid showed strong anesthetic properties without undesirable side-reactions; the $H_2N-CH_2CH_2$ ester showed max. effect; the deriva. of the amino-naphthalenepropionic acid, as expected, failed to show anesthetic properties. G. M. Kosciuszko

ILINA, A. S.

"On the Chemical Structure of 2-Sulphenylamidopyr'dine. (Sulphidine) and its N-Substituted by the Alkylcarboxylic Acids." by G. Yu. Maghison and A. S. Ilin. (p. 1933)

SC: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1946, Volume 16, No. 11

CA

10

Introduction of the formyl residue into acylamino acids and condensation of the products with thiolamino acids into thiazolidine derivatives. I. Formylhippuric ester and its derivatives. A. S. Khina and O. Yu. Mikhlin, *Zh. obshch. khim.* 31, No. 10, 1957. Formylation of hippuric acid derivatives was studied in connection with synthetic studies in the penicillin program. Hippuric acid (5.8 g, Na salt) in 100 ml. aq. KOH was treated with 10 g. HCOCl with cooling, and after 2 hrs. with 50 g. K₂CO₃ at 12-16°, and the mixt. stirred 2 hrs., and let stand 18 days in a closed flask; filtration and washing with dry EtOH gave 46.5 g. Na deriv. of *l*-formylhippurate (I); 10 g. of this in 40 ml. H₂O, treated with activated charcoal, filtered, and added slowly with cooling to 48 ml. 7% HCl, gave 7 g. I, m. 52-53°. 1.67 g. in 40 ml. 1% cold NaOH again treated with charcoal and added to 40 ml. 7% HCl with cooling gave 5.5 g. pure *l*-formylhippurate, m. 57-58°, which does not give a color with FeCl₃; 2,4-dinitrophenylhydrazine, m. 178-9° (from EtOH); semicarbazone, m. 164-5°. Letting 3 g. I stand overnight in 20 ml. 80% EtOH with 1.2 g. NaOH, followed by concn. *in vacuo*, soln. in H₂O, treatment with charcoal, and acidification with HCl gave 2.1 g. hippuric acid. Boiling 5.3 g. I 5.5 hrs. in 50 ml. aq. KOH contg. 0.5 g. dry HCl gave 5 g. *dl*-*l*-acetal, b. 166-70°, b.p. 145-50°, which (5 g.), kept 18 hrs. in 40 ml. EtOH and 2.2 ml. NaOH (d. 1.437) gave, upon the usual treatment and acidification with HCl, the *dl*-*l*-acetal, m. 88-9° (from C₆H₆-petr. ether), of *α*-formylhippuric acid (II),

which treated 3 hrs. at room temp. with 80% EtOH gave the *free* II, m. 80-81° (from 95% EtOH), which reacts with FeCl₃ and forming a Ag mirror. Heating 0.1 g. II (0.22 g. *l*-cysteine-HCl, and 0.5 ml. H₂O for several min. dilg., and neutralizing with 0.1 g. NaHCO₃ gave 0.35 g. 2-benzamidoethyl-*l*-carboxythiazolidine, m. 173-4° (from 70% EtOH). Letting 3.7 g. *l*-cysteine-HCl, 30 ml. MeOH, and 1.7 g. I stand 43 hrs. gave 30.8% *l*-*l*-*l*-carboxy-2-thiazolidylhippurate, m. 160-1° (from 80% MeOH). Heating 2 g. I with 1.0 g. *N*,*N*,*N*,*N*-tetramethyl-*l*-lysine 3.5-4.0 hrs. at 50-60° gave 1.5 g. *l*-*l*-*l*-carboxy-3,3-dimethyl-2-thiazolidylhippurate-III_l (from EtOH) MeOH, decamp. 170-1°. Heating 1.45 g. II, 7 ml. AcOH, and 0.9 ml. dry pyrrolidine 0.5 hr. on a steam bath gave on evapn. 0.8 g. 2-phenyl-4-ethoxymethylene-5-*l*-thiazolone, needles, m. 95-6° (from petr. ether). G. M. Kozlovskii

USSR/Chemistry - Antibiotics

Mar 51

"Introduction of the Formyl Radical Into Acylamino Acids and Condensation of the Compounds Obtained With Thiazolidine Derivatives,"
A. S. Yelina, O. Yu. Magidson, Lab of Heterocycles,
All-Union Sci Res Chemcophar Inst Imeni S. Ordz-
honiidze

"Zhur Obshch Khim" Vol XXI, No 3, pp 559-564

Synthesis of analogues of penicillanic acid. Stud-
ied formylation of hippuric ester; sepd carbonyl
form of formylhippuric ester. Synthesized: diac-
etahippuric ester, formylhippuric acid; 2-benzoyl-
laminoethyl-4-carboxythiazolidine; ethyl esters of

176T30

USSR/Chemistry - Antibiotics (Contd)

Mar 51

α -(4-carboxy-2-thiazolidyl)- and α -(4-carboxy-5,5-
dimethyl-2-thiazolidyl)-hippuric acids; and 2-phenyl-
4-ethoxymethylene-oxazolone-(5).

176T30

YELINA, A. S.

Chem 19

10

Introduction of the formyl radical into acylamino acids and condensation of the products with thiolamino acids into thiazolidine derivatives. II. α -Formylphenaceturic esters and derivatives. A. S. Elna and O. Yu. Magidson (S. Otdzhonikidze All-Union Chem.-Pharm. Inst., Moscow). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 21, 789-8 (1951); cf. C. I. 45, 8513g. To 54.5 g. powder, Na in 575 ml. abs. EtO is added 138 ml. dry EtOH, the mixt. boiled 2 hrs., treated with 420 ml. abs. EtO, cooled to -5° , treated slowly with 150 g. EtOCH and 200 g. $\text{ClCH}_2\text{CO}_2\text{Et}$ at -5° , and the Na *depos.* of $\text{HCOCHClCO}_2\text{Et}$ filtered off after 12 hrs., taken up in EtO, and acidified with dil. HCl, yielding 30% $\text{OHCCHClCO}_2\text{Et}$, b.p. $64-85^\circ$ (crude), m. $88-90^\circ$ (from Call). This (91.3 g.) in 450 ml. abs. EtOH treated with 1.5 g. dry HCl and boiled 12 hrs., yields 80 g. $(\text{EtO})_2\text{CHCHClCO}_2\text{Et}$, b.p. $101-11^\circ$. Attempts to replace the Cl with NH₂ or RNH groups failed. To EtONa (from 2.74 g. Na and 7.4 ml. EtOH in 40 ml. EtO) was added slowly 10 ml. EtOCH, followed by 25.4 g. $\text{PhNHCH}_2\text{CO}_2\text{Et}$, the mixture allowed to stand 8 days in a closed flask, treated with H_2O , extd. with EtO, and the aq. layer acidified with HCl and extd. with EtO, yielding mixed 1:1 enol-keto forms of $\text{Et } \alpha$ -formylphenaceturate (I), an oil. Treatment with the calcd. amt. of 2,4-(O)₂N₂ $\text{C}_6\text{H}_3\text{NHNH}_2$ in EtOH and addn. of 1 drop concd. HCl gave rapid crystn. of the 2,4-dinitrophenylhydrazone, m. $186-7^\circ$ (from EtOH). Gradual addn. of Al-Hg to 5 g. ester in 150 ml. moist ether gave after 3 days' reaction 3.2 g. Et ester of N -(phenylacetyl)serine, an oil. Boiling this with 1:15 H_2SO_4 yields $\text{PhCH}_2\text{CO}_2\text{H}$, while the filtrate, treated with

BaCO_3 and concd., yields serine (0.55 g. from 1 g. ester). Heating 3 g. I and 1.9 g. α -cysteine-HCl in 0.5 ml. H₂O 10-15 min. on a steam bath gave, on aq. treatment and neutralization with NaHCO_3 , 3.3 g. $\text{Et } \alpha$ -(4-carboxy-2-thiazolidyl)phenaceturate, m. $179-60^\circ$ (from 50% EtOH). Heating 0.8 g. I and 0.5 g. DL-dimethylcysteine-HCl 3 hrs. at 60° and treatment with EtO-MeOH gave 0.7 g. $\text{Et } \alpha$ -(4-carboxy-5,5-dimethyl-2-thiazolidyl)phenaceturate-HCl, m. $181-2^\circ$; this boiled with 5% NaOH again begins to give color with Na nitroprusside. Refluxing 4 g. I in 40 ml. abs. EtOH and 0.4 g. dry HCl 6 hrs. gave some $\text{EtOCHCl}_2\text{Ph}$ and 1.5 g. I *di-Et acetal*, b.p. $170-3^\circ$, which (1.3 g.) on standing 24 hrs. with 8 ml. EtOH and 0.55 ml. NaOH soln. (d. 1.457) and concn., followed by decolorization in aq. soln. and acidification with HCl gave 0.94 g. α -formylphenaceturic acid *di-Et acetal*, m. $108-9^\circ$ (from Call-petr. ether; decomps.). This (0.45 g.) heated 20 min. on a steam bath with 2.2 ml. AcO and 0.2 ml. pyridine, diltd. with EtO, and extd. with 5% NaOH, followed by acidification of the cooled aq. layer with dil. HCl, gave 2-benzyl-4-(hydroxy-methylene)-5-thiazolidone, m. $108-109^\circ$ (from CCl_4), giving a blue-green color with FeCl_3 in EtOH. Reactions of $\text{PhCH}_2\text{NHCH}_2\text{CO}_2\text{Et}$ with EtOCH and NaOH or Na always gave 2 substances which did not have a CHO or HOCH₂ group. G. M. K.

1951

YELINA, A. S.

USSR/Chemistry - Penicillin and Analogues Apr 51

"Introduction of the Formyl Radical Into Acylamino Acids and Condensation of the Compounds Obtained with Thiolamino Acids Into Thiazolidine Derivatives. II. α -Formylphenacetic Ester and Its Derivatives," A. S. Yelina, O. Yu. Magidson, Inst of Heterocycles, All-Union Sci Res Chemicheskoye Imeni S. Ordzhonikidze

"Zhur Obshch Khim" Vol XXI, No 4, pp 780-786

Found optimum conditions for prepn of ethyl ester of α -formylphenacetic acid, one of reagents needed for prepn of penicilloic ester II, and

USSR/Chemistry - Penicillin and Analogues Apr 51
(Contd) 182129

established structure of former. Used α -formylphenacetic ester in reactions: (1) to form, with chlorohydrates of L-cysteine and D, L-di-methylcysteine, α -(4-carboxy-2-thiazolidyl)-phenacetic acids; (2) for its diethylacetal to be saponified with alkali to form diethylacetal of α -formylphenacetic acid; (3) to saponify ethoxymethylene group of 2-benzene-4-ethoxymethylene-oxazolone-(5), yielding 2-benzyl-4-hydroxymethylene-oxazolone-(5).

182129

May 52

A.S.Yelina, O. Yu. Magidson

USSR/Chemistry - Antibiotics; Penicillin

"The Reaction Between Diethyl Acetal of Formylhippuric Acid and Thiocyl Chloride,"
Lab of Heterocyclic Compds, All-Union Sci Res. Chem Pharm Inst im Ordzhonikidze

Zhur Obshch Khim, Vol 22, No5, pp 874-879

In the reaction between formylhippuric acid (I) and thiocyl chloride (II) (1 gram-mol: 1 gram-mol), a mol of et alc is split off and ethoxymethylene hippuric acid (III) is formed. When, treated with acetic anhydride or II at a 1 gram-mol: 1 gram-mol ratio, III yields 2-phenyl-4-ethoxymethyleneoxazolinone-(5) (IV). The ethoxymethylene group of III in contrast to the analogous group of IV is not attacked by alkalies. The diethyl acetal-formylhippuric acid reaction, when carried out with a 1 gram-mol:2.5 gram-mol ratio, yields IV and on prolonged interaction results in the hydrochloride of IV. The authors disagree with the theory of the mechanism of the formation of salts of the 2-phenyl-4-alkoxy-methylene oxazolinones, as suggested by Hunter, Hinman, and Carter, "The Chemistry of Penicillin" (1948) 2-phenyl-4-anilino-methyleneoxazolinone-(5) exists in a low-melting and a high-melting form. The low-melting form changes into the high-melting one.

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ELINA, A.S.

Chemical Abst.
Vol. 48 No. 5
Mar. 10, 1954
Organic chemistry

(3)
The reaction of formylphosphoric acid diethyl acetal with
thionyl chloride. A. S. Elina and O. Yu. Magidson (S.
Soviet Union Research Inst. Pharm. Chem.,
Moscow). J. Gen. Chem. U.S.S.R. 22, 835-8 (1952) (Engl.
translation).—See C.A. 47, 3276f. H. L. H.

7-28-54

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79-28-5-61/69

AUTHOR: Yelina, A. S.

TITLE: N-Oxides of the Quinoxaline Series (N-Oksidy khinoksalinovogo ryada).
II. N-Oxides of the β -(Quinoxalyl-2)-Propionic- and β -(Quinoxalyl-2)-Acrylic Acid (II. N-Oksidy β -(khinoksalil-2)-propionovoy i β -(khinoksalil-2)-akrilovoy kisloty)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol, 28, Nr 5, pp. 1378-1382 (USSR)

ABSTRACT: In connection with the previous publication by the author and her collaborator (Reference 1) it was of interest to her to investigate the N-oxides of β - (quinoxalyl-2)-propionic acid and its derivatives for their biological characteristics. As in the molecule of this acid the electrophilic carboxyl group is separated from the cycle of the two-membered saturated carbon chain it was to be expected that the Di-N-oxide of the β -(quinoxalyl-2)-propionic acid could be obtained by direct oxidation of the initial acid with hydrogen peroxide. The 1,4-Di-N-oxide of the β -(quinoxalyl-2)-propionic acid was in fact obtained in good

Card 1/3

N-Oxides of the Quinoxaline Series.

II. N-Oxides of the β -(Quinoxalyl-2)-Propionic- and
 β -(Quinoxalyl-2)-Acrylic Acid

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yield in its oxidation with 45% hydrogen peroxide in glacial acetic acid. On less rigorous conditions (5% H_2O_2 !) this oxidation showed, however, that the electrophilic carboxyl group in the given case also exerts a certain influence on N^1 of the quinoxalylcycle as the mono-N-oxide obtained at the end of the reaction turned out to be an 4-N-oxide of the β -(quinoxalyl-2)-propionic acid; this influence seems to be of induction character. Thus it was found that in the oxidation of β -(quinoxalyl-2)-propionic acid with diluted peroxide in acetic acid a mono-N-oxide forms the nitrogen being in position 4, but that with higher concentration of the peroxide also the oxidation of the second nitrogen takes place with the formation of the 1,4-Di-N-oxide of the β -(quinoxalyl-2)-propionic acid. In the hydration of this compound, first the N^4 -O-group, and then, the second N^1 -O-group is reduced. A method of synthesis for the β -(quinoxalyl-2)-acrylic acid of quinoxalyl-2-aldehyde and malonic acid was proposed. There are 3 references, 2 of which are Soviet.

Card 2/3

N-Oxides of the Quinoxaline Series.
II. N-Oxides of the β - (Quinoxalyl-2)-Propionic
and β -(Quinoxalyl-2)-Acrylic Acid

79-28-5-61/69

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze (All-Union Scientific Chemical Pharmaceutical Research Institute imeni S. Ordzhonikidze)

SUBMITTED: April 13, 1957

Card 3/3

SOV/79-29-8-71/81

5(3)

AUTHOR:

Yelina, A. S.

TITLE:

N-Oxides of the Quinoxaline Series. III. N-Oxides of the α -Alkyl- β -(quinoxalyl-2)-propionic Acids

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 8, pp 2763 - 2768 (USSR)

ABSTRACT:

The author continued her investigations of the chemical and biological properties of the N-oxides of the quinoxaline series (Ref 1) and in the present case synthesized the α -alkyl- β -(quinoxalyl-2)-propionic acids and their N-oxides. These acids were obtained by the scheme mentioned. The initial product for this synthesis had to be 2-bromoethylquinoxaline. So far its synthesis had not been successful. G. M. Benett and G. H. Willis (Ref 2) obtained in the bromination in acetic acid in the presence of sodium acetate the 2-(ω)-tribromomethylquinoxaline (10%) only. R. M. Acheson (Ref 3) could not do more than confirm that result. The attempts on the part of the author to obtain 2-bromoethylquinoxaline by the bromination of 2-methylquinoxaline in acetic acid and other solvents failed as well. Here a strong resinification of the reaction products occurred.

Card 1/2

N-Oxides of the Quinoxaline Series. III. N-Oxides of the SOV/79-29-8-71/81
 α -Alkyl- β -(quinoxalyl-2)-propionic Acids

The bromination of 2-methylquinoxaline to the monobromo derivative was successful in a highly acid medium (a mixture of sulphuric and acetic acids). The 2-bromomethylquinoxaline yield was 36.7%; the second reaction product was 2,4-dibromomethylquinoxaline (26.6%). The condensation of 2-bromomethylquinoxaline with the sodium derivatives of alkyl malonates and subsequent saponification of the condensation products and decarboxylation of one of the carboxyl groups resulted in the α -alkyl- β -(quinoxalyl-2)-propionic acids. By the oxidation of these acids with perhydrol in acetic acid the 1,4-di-N-oxides of the α -alkyl- β -(quinoxalyl-2)-propionic acids were obtained. The bromine atoms in the molecule of 2,4-dibromomethylquinoxaline are not easily substituted. The 2-bromomethylquinoxaline causes tears, darkens when exposed to light, and is resinified gradually into a black mass. There are 5 references, 1 of which is Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze (All-Union Scientific Chemo-pharmaceutic Research Institute imeni S. Ordzhonikidze)

SUBMITTED: July 5, 1958
Card 2/2

YELINA, A.S.

N-Oxides of the quinoxalin series. Part 4: Oxidation-reduction reactions of N-oxides of 2,3-dimethylquinoxaline. Zhur. ob. khim. 31 no.3:1018-1023 Mr '61. (MIRA 14:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.
(Quinoxaline)

KEROP'YAN, M.P.; YELINA, A.S.

Stereochemical studies in the series of levomycetin (chloroamphenicol) derivatives. Part 1: Hydrolysis of nitro ethers of threo- and erythro-1-(p-nitrophenyl)-2-acylamino-1, 3-propanediols. Zhur.ob. khim. 31 no.10:3298-3303 O '61. (MIRA 14:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.
(Propanediol)

YELINA, A.S.

N-oxides of the quinoxaline series. Part 5: Reactions of N-oxides
of quinoxaline and 2-methylquinoxaline with acetic anhydride.
Zhur.ob.khim. 32 no.9:2967-2973 S '62. (MIRA 15:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni S. Ordzhonikidze.
(Quinoxaline) (Acetic anhydride)

YELINA, A.S.; TSIRUL'NIKOVA, L.G.

N-oxides of the quinoxaline series. Part 6: N-oxides of quinoxaline amino and hydroxy derivatives. Zhur. ob. khim. 33 no.5: 1544-1551 My '63. (MIRA 16:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.
(Quinoxaline)

YELINA, A. S.; TSYRUL'NIKOVA, I. G.

N-oxides of the quinoxaline series. Part 7: Hydroxy-methylation
of 2-methyl- and 2,3-dimethylquinoxalines and their N-oxides.
Zhur. ob. Khim. 34 no.6:2077-2081 Je '64 . . (BIRA 17:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni Ordzhonikidze.

YELINA, A.S.

Reaction of 1,4-di-N-oxide of quinoxaline with benzenesulfonic chloride. Zhur. ob. khim. 34 no.8:2809-2910 Ag '64.
(MIRA 17:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Otdzhonikidze.

YELINA, A.S., TSYRUL'NIKOVA, L.G.; KSHIVETSEVA, M.I.

N oxides of the quinoxaline series. Part 8: Oxidation of dimethylquinoxaline and its methylol derivatives by nitric acid. Zhur. org. khim. 1 no.1:147-149 Ja '65. (MIRA 18:5)

1. Vseroyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.

YELINA, A.S.; TSYRUL'NIKOVA, L.G.

N-oxides of the quinoxaline series. Part 10: -oxy (acetoxy)propyl derivatives of quinoxaline and their N-oxides. Zhur. org. khim. 1 no.6:1159-1162 Je '55. (MIRA 18:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy inatitut imeni Ordzhonikidze.

ИЛИНА, Г.А.; ЮРКОВСКАЯ, Т.К.

Bogs on the White Sea shore of Karelia. Bot. zhur. 50 no.4:426-
497 Ap '65. (MIRA 18:5)

1. Institut biologii Petrozavodskogo gosudarstvennogo universiteta.

YELINA, G.L.; GUSEV, S.S.; YERMOLENKO, I.N.

Preparation and spectral study of partially acetylated
carboxyl-containing cellulose. Dokl. AN BSSR 8 no.2:104-107
F '64. (MIRA 17:8)

1. Institut obshchey i neorganicheskoy khimii AN BSSR.
Predstavleno akademikom AN BSSR M.M. Favlyuchenko.

GAVRILOV, M.Z.; YERMOIENKO, I.N.; YELINA, G.L.

Ultraviolet absorption spectra of acetyl cellulose. Opt. i
spektr. 18 no.3:515-517 Mr '65. (MIRA 18:5)

YELINA, L. N.

"Mechanism of Electrochemical Generation of Oxygen on Nickel and Iron."
Sub 7 May 51, Order of the Labor Red Banner Sci Res Physicochemical Inst
imeni L. Ya. Karpov.

Dissertations presented for science and engineering degrees in Moscow
during 1951.

SO: Sum. No. 480, 9 May 55

YELINA, L. M.
USSR/Chemistry

Card 1/1

Authors : Elina, L. M., Borisova, T. I., and Zalkind, Ts. I.

Title : The process of electro-chemical separation of oxygen on nickel

Periodical : Zhur. Fiz. Khim., 23, Ed. 5, 735 - 796, May 1954

Abstract : Investigation of the state of a nickel electrode, during its anode polarization to potentials corresponding to the zone of oxygen supersaturation, showed that the separation of the oxygen takes place on the surface of the electrode covered with an oxide layer and that the very act of oxygen separation is closely connected with the properties of these oxides. The processes of electrode oxidation and oxygen separation are simultaneous at one and the same potential. At small current densities the rate of oxygen separation is limited by the rate of decomposition of the higher oxygen compound. The mechanism of the oxygen separation process is explained. Fifteen references: 3-German since 1905, 11-USSR, 1-English. Tables, drawings, graphs and photos.

Institution : The L. Ya. Karpov Physico-Chemical Institute, Moscow

Submitted : July 3, 1953

USSR/Physical Chemistry - Electrochemistry.

B-12

Abs Jour : Referat Zhur - Khimiya, No 6, 25 March 1957, 18722

Author : Elina, L.M., Borisova, T.I., and Filippov, T.S.

Inst : RZhKhim, 1957, 7680

Title : On the Mechanism of Electrochemical Formation of Oxygen Compounds of Chlorine Upon a Smooth Platinum Electrode. II. Investigation of the Process of Oxidation of Chlorine-ion by the Method of Alternating Currents.

Orig Pub : Zh. fiz. khimii, 1956, 30, No 6, 1282-1290

Abstract : The authors examined the mechanism of anode oxidation of Cl^- ion in acid solutions, upon smooth Pt-electrode, by the methods of measuring capacitance (C) and resistance in alternating current of different frequency (10-2000 Hz), and by taking polarization curves. The presence of a sharp maximum in the region of potentials (E) (+1.4) - (+1.5) v. (n.v.e.) upon the curve (C,E) measured in an acidified solution of Na_2SO_4 containing 0.1 n. HCl,

Card 1/2

- 320 -

1. YELINA, L. M.
2. USSR (600)
4. Oka-Tsna Region - Coal
7. Lithological-petrographical studies of the coal deposits of the northern part of the Oka-Tsna anticline (thematic work for 1942). (Abstract.) Izv.Glav.upr.geol.fon. no. 2, 1947

8. Monthly List of Russian Accessions. Library of Congress. March 1953. Unclassified.

IL'INA, N.S.; YELINA, L.M.; FRUKHT, D.L.

Geological structure of Gorkiy Province and adjacent regions.
Trudy VNIGI no.6:3-11 '55. (MLRA 9:11)
(Gorkiy Province--Geology, Stratigraphic)
(Gorkiy Province--Coal geology)

YELINA, L.M.

SUVCHOV, V.A.; ~~YELINA, L.M.~~; ~~YELINA, L.M.~~; ~~YELINA, L.M.~~
SECHIRAYNO, S.K.; ~~YELINA, L.M.~~; ~~YELINA, L.M.~~; ~~YELINA, L.M.~~
IVANOVA, Z.P.; ~~YELINA, L.M.~~; ~~YELINA, L.M.~~

Central provisions of the Russian Platform. Trudy VNIIGI no.101:171-248
'57. (MIRA 10:9)

(Russian Platform--Geology)

YELINA, L.M.

AUTHOR
TITLE

PERIODICAL

ABSTRACT

SEMIKHATOVA S.V., YELINA L.M., DALMATSKAYA I.I.
20-5-48/67
The Moscow Stage of Middle Carboniferous in the Melekess Depression.
(Moskovskiy yarug Srednego karbona v Melekesskoy vpadine -Russian)
Doklady Akademii Nauk SSSR, 1957, Vol 113, Nr 5, pp 1119-1122 (U.S.S.R.)
Received 8/1957

The deposits of the Moscow stage near the city of Melekess (in the territory of Kuybyshev-Samara) were laid open in a depth of 1167-785 m. The deposits of the Verey horizon (44 m) are concordantly stratified on the rocks of the upper part of the Bashkir stage. This horizon is subdivided into 3 lithological stratified packets. The lowest (8 m) consists of limestone with a sparse admixture of clay and intermediate strata of aleurites and dolomites. In limestone there is a lot of organogenic detritus of foraminifera, crinoids, brachiopods, and algae. The middle packet (30 m) is a varying stratification of clays, marls, aleurites, limestone, and rare dolomites. Clays are predominant, with 7-27% aleurite admixture, with calcareous intermediate strata which contain fragments of crinoids, brachiopods, as well as remains of plant tissue and lentiform intermediate strata of crushed brachiopod shells. The Kashir horizon consists of 2 stratified packets. The lower one (22 m) consists of limestone with inferior dolomites. The top packet (68 m) consists of limestone with thin clayey intermediate strata, its structure, however, is on the whole similar to that on the lower packet. The Podol horizon is at the top faintly characterized by fauna and its boundary is traced according to electric corotage. Compared to the Kashir horizon the dolomites are here more developed than the limestone. Among limestone, alga-

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The Moscow Stage of Middle Carboniferous in the Melekess 20-5-48/67 Depression.

limestones are characteristic. 3 stratified packets: 42, 49, and 36 m. In the lower organogenic -detrital clayey limestone with thin dolomite-intermediate strata and lentils of green clay dominate. Among the remains of organism there are up to 20% bryozoa-flakes, elsewhere up to 15% siphonic-algae. In the second packet dolomites with clayey intermediate strata and rare prints of brachiopods predominate, inclusions of gypsum, anhydrite, and flint are found. The top packet is chiefly built of organogenic-detritic limestone with dolomite-intermediate strata in the middle part. The Myachkov horizon consists of limestone with dolomite- and clayey intermediate strata as in the Podol horizon. There are three packets: 6, 5, 25, and 88 m. Also here anhydrite, gypsum, and flint are to be found. The first packet consists of organo-detritic limestone with clayey intermediate strata, frequently such of shell-rock are up to 1,5-3 cm thick. The second packet consists of dolomites with intermediate strata of organogenic-splintery and sometimes oolitic limestone. Foraminifera and brachiopods were determined. The third packet consists of varying stratifications of limestone, dolomite, and thin clayey strata of similar character as on the top. The total thickness of the deposits of the Moscow stage amounts in Melekess to 383 m and thus surpasses those of the right bank of the Volga to some extent. According to the rock-types of the single horizons and the total composition of the fauna the deposits of this stage in Melekess are equal to the deposits of the same age in the Tataric vault and in the central parts of the Moscow synclisis although local peculiarities are to be noticed.

Card 2/3

The Moscow stage of Middle Carboniferous in the Melekess Depression. 20-5-48/67

ASSOCIATION Allunion-Scientific Research-Institute for Geological Petroleum-investi-
gations.
PRESENTED BY STRANOV N.M., Member of the Academy
SUBMITTED 22.10.1956
AVAILABLE Library of Congress
Card 3/3

IL'INA, N.S., kand.geologo-mineralog.nauk; YELINA, L.N.; RYZHOVA, A.A.;
BUZINOVA, V.M.; DMITRIYEVA, L.Ya.; GIMPELEVICH, E.D.; GALAKTIONOVA,
N.M.; IL'INSKAYA, V.V.; SOLOV'YEVA, N.S.; KARASEV, M.S.; BAKIROV, A.A.,
red.; VEBER, V.V., red.; DANOV, A.V., red.; DIKENSHTEYN, G.Kh., red.;
MAKSIMOV, S.P., red.; POZNYSH, M.A., red.; SAIDOV, M.N., red.;
SEMIKHATOVA, S.V., red.; TURKEL'TAUB, N.M., red.; UL'YANOV, A.V., red.
[deceased]; KHALTURIN, D.S., red.; SHABAYEVA, Ye.V., red.; CHIZHOV,
A.A., vedushchiy red.; YASHCHURZHINSKAYA, A.B., tekhn.red.

[Coal deposits of the central provinces of the Russian Platform]
Kamennougol'nye otlozheniia tsentral'nykh oblastei Russkoi platformy.
Pod red. N.S.II'inoi. Leningrad, Gos.nauchno-tekhn.izd-vo nef. i
gorno-toplivnoi lit-ry, 1958. 209 p. (MIRA 12:3)
(Russian Platform--Coal geology)

SEMIKHATOVA, S.V.; YELINA, L.M.

Carboniferous sediments. Trudy VNIGNI no. 10:41-51 '58.
(MIRA 14:5)
(Russian Platform—Geology, Stratigraphic)

Yelina, L.M. 20-2-50/60

AUTHORS: Semikhatova, S. V. , Yelina, L. M. , Dalmatukaya, I. I.

TITLE: Deposits of the Bashkirskiy Stage in Melekess (Otlozheniya bashkirs-kogo yarusa v Melekesse)

PERIODICAL: Doklady AN SSSR, 1958, Vol. 118, Nr 2, pp. 381 - 383 (USSR)

ABSTRACT: These sediments are deposited with a stratigraphic discordance on the rocks of the Protvinskiy horizon. The gap in the sedimentation manifests itself here in the development of lime-conglomerates and in a high secondary change of the rocks in the upper part of this horizon. The Bashkirskiy stage is 45 m thick and lithologically subdivided in 2 horizons of local importance. The exact identification of the latter may be carried out because of certain local differences of the foraminifera fauna. The lower horizon (probably analogous to the Molotovskiy horizon) is 26 m thick and consists of light-gray and white limes which are highly recrystallized and highly silicified, and which contain flint-inclusions and clay-admixtures. With regard to fauna crinoid-foraminifera-limes predominate, those containing brachiopods and other fossils of animal groups are more seldom represented. The foraminifera fauna makes assume an analogy with the Molotovskiy horizon, but the Pseudostaf-fella are too scarce for this. On the other hand the occurrence of

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20-2-50/60

Deposits of the Bashkirskiy Stage in Melekess

numerous Archaediscus-species gives this horizon a certain similarity with the complex of the Krasnopolynaskiy horizon. It can, however, not be classified with this due to the presence of Pseudo-staffella antiqua. It should rather be classified with the Molo-tovskiy horizon. The upper part of the Bashkirskiy stage is 19 m thick and may lithologically be subdivided in 2 parcels. The lower one consists of limes which are very similar to the above-mentioned ones lying in the lower part of the stage. The upper parcel, of small thickness, is formed by an alternating sedimentation of organogenic and micro-granular clayey limes, marls and clays. The upper part of the Bashkirskiy stage according to the foraminifera fauna may also be subdivided in 2 parts, but the boundary between them does not agree with that between the two lithological parcels. The comparison of the foraminifera complexes of the two above-mentioned parts of the stage with the complexes of the same stage of other districts shows a certain peculiarity of the two complexes of the Bashkirskiy stage of Melekess. Deviations from the vertical distribution of the species and in connection with them, the local differences in the amount of the complexes which characterize the horizons undoubtedly indicate peculiarities of the existence of the fauna in the Melekess section of the Bashkirskiy waters or the peculiarity of the settlement of this section by the fauna. The

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Deposits of the Bashkirskiy Stage in Melekess

differences of the fauna stand in the complexes render their assimilation difficult. Nevertheless the upper complex may be equated with the upper part of the Podvereyskiy horizon (according to the first occurrence of Aljutovella and Verella). The first occurrence of Schubertella here might be explained by its belated penetration to this part of the water. Thus only the upper half of the sediments of the Bashkirskiy stage is apparently present in the Melekess. There is no gap between the Bashkirskiy- and Vereyskiy sediments, here. The Bashkirskiy sediments at the right bank of the Volga approximately have a similar extension in the Uljanovskiy support bore-hole, but the thickness here decreases toward the west to 25 m and still further. These facts reflect the existence of apparently large elevations during the Carboniferous.

ASSOCIATION: All-Union Scientific Research Institute for Petroleum Geology and Prospecting (Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut)
PRESENTED: March 14, 1957, by S. I. Mironov, Academician
SUBMITTED: March 14, 1957
AVAILABLE: Library of Congress

Card 3/3

YELINA, L.M., Cand Geol Min Sci — (diss) "Lithology and
phases of the central coal ^{deposits} ~~sediments~~ of the central part of
the Russian platform and ~~the~~ adjoining regions of
Volga-Ural'skaya Oblast." Mos, 1959, 16 pp (Min of Geology
and Conservation of Mineral Resources USSR. All-Union
Sci Res Geol Prospecting Petroleum Inst VNIGI) 110 copies
List of author's works pp 15-16 (12 titles) (KL, 34-59, 112)

- 26 -

SEMIKHATOVA, Sof'ya Viktorovna, prof.; YELINA, Lyubov' Mikhaylovna;
RYZHOVA, Antonina Aleksandrova; BYTSHEVA, Tamara Vladimirovna;
DALMATSKAYA, Irina Ippolitovna; DOBROKHOTOVA, Sof'ya Vasil'yevna;
MINYAYEVA, Yevgeniya Georgiyevna; ROSTOV'TSEVA, Lidiya Fedorovna;
ZARETSKAYA, A.I., ved.red.; POLOSINA, A.S., tekhn.red.

[Studies on Carboniferous sediments of the Volga-Ural oil-bearing
province] Materialy k izucheniiu kamennougol'nykh otlozhenii
Volgo-Ural'skoi neftenosnoi oblasti. Pod red. S.V.Semikhatovoi.
Moskva, Gos.nauchno-tekhn.izd-vo nef. i gorno-toplivnoi lit-ry,
1959. 206 p. (MIRA 13:3)

(Volga Valley--Geology)
(Ural Mountains--Geology)

YELINA, L.M.; DMITRIYEVA, L. Ya.

Stratigraphy and lithology of middle and upper Carboniferous
sediments in the Shikhovo-Chepetskiye wells 1 and 2. Trudy
VNIGNI no.20:73-87 '59. (MIRA 13:6)
(Vyatka Uval--Geology, Stratigraphic)

VESELOVSKAYA, M.M.; YELINA, L.M.; IL'INA, N.S.; KARASEV, M.S.; SOKOLOVA,
L.I.; FILIPPOVA, M.F.; FRUKHT, D.L., kurator

Alatyr key well. Trudy VNIIGI no.26:113-175 '60. (MIRA 14:1)
(Russian Platform--Petroleum geology)

GASSANOVA, I.G., kurator; YELINA, L.M.; IL'INA, N.S.; KARASEV, M.S.;
PEDASHENKO, A.I. [deceased]; FILIPPOVA, M.F. KHOKHLOV, P.S.

Kikino key well. Trudy VNIGI no.26:227-307 '60. (MIRA 14:1)
(Russian Platform--Petroleum geology)

YELINA, N. A.

"Data on the Characteristics of the Cause of the Emergence and on the Nature of the Course of Eclampsia." Cand Med Sci, Second Moscow State Medical Institute I. V. Stalin, 15 Dec 54. (VM, 3 Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

PLETNEVA, N.I.; YELINA, N.A.; DENISOV, A.P.; GAVRILOV, A.P.

Accessory rare-earth silicate-apatite from pegmatites. *Mat.*
po min. Kol'. poluost. 2:123-132 '62. (MIRA 16:4)

(Kola Peninsula—Apatite)
(Kola Peninsula—Pegmatites)

DENISOV, A.P.; DUDKIN, O.B.; YELINA, N.A.; KRAVCHENKO-BEREZHNOY, R.A.;
POLEZHAYEVA, L.I.

Relationship between the physical properties of apatite and the admixture of rare earths and strontium. Geokhimiya no.8:666-675 '61.
(MIRA 17:3)

1. Kol'skiy filial imeni Kirova AN SSSR.

L 5459-66 EWA(k)/FBD/ENT(1)/ENT(m)/EPF(c)/BEG(k)-2/T/ENP(t)/ENP(k)/ENP(b)/
EWA(m)-2/EWA(h) SCTB/IJP(c) WG/JD

ACC NR: AP5025098

SOURCE CODE: UR/0366/65/003/003/0265/0269

AUTHORS: Bykhovskaya, L. N.⁴⁴; Gurevich, I. M.⁴⁴; Yelina, N. G.⁴⁴; Kononova, S. V.⁴⁴;
Neyman, I. S.⁴⁴; Charnaya, F. A.⁴⁴

ORG: All-Union Lumo-Technical Research Institute, Moscow⁴⁴ (Vsesoyuznyy nauchno-
issledovatel'skiy svetotekhnicheskiy institut)

TITLE: Impulse lamps VNISI for lasers

76
B

SOURCE: Zhurnal prikladnoy spektroskopii, v. 3, no. 3, 1965, 285-289

TOPIC TAGS: ⁴¹xenon lamp, impulse lamp, optical pumping, optical quanta generator

ABSTRACT: In order to develop reliable ^{45,44}lasers for use as optical pumps in various solid state devices, the performance of 8 different Xe lamps was studied. Lamps having straight and cylindrical spirals and flash energy output between 200 to 2000 joules were studied. The spectral distribution, light intensity, and electrical resistance of the lamps were determined. The results are presented in tables and graphs (see Fig. 1). It is concluded that the observed saturation of radiant energy F_{λ} in the region of 900 Å for the lamp IP-400 (400 mm Hg Xe) is

Card 1/2

UDC: 621.385.8

0901094/4

L 5459-66

ACC NR: AP5025098

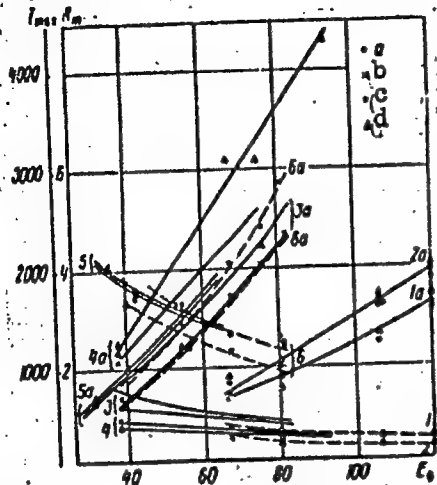


Fig. 1. Dependence of current amplitude I_{max} (a) curves 1a - 6a and resistance of impulse lamps R_m (ohm) at the instant of I_{max} - curves 1 - 6 on the initial potential gradient E_0 (v/cm).
1 - 1a - IP-200; 2, 2a - IP-400;
3, 3a - IP-3000; 4, 4a - IP-5000;
5, 5a - ISTS-10000; 6, 6a - ISP-10000;
a - at $C = 20\mu$ microfarad; b - 530 mf;
c - 1160 mf; d - 1475 mf.

due to line plasma absorption. Orig. art. has: 3 tables and 4 graphs.

SUB CODE: EE, OP, EC / SUBM DATE: 00/

ORIG REF: 010/

OTH REF: 003

Card 2/2 *md*

heated by high-frequency current. The power is determined from measurements of residual electrical resistance

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CIA-RDP86-00513R001962520019-6

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001962520019-6"

L 20644-66 ENT(m)/EWA(d)/EWP(t) IJP(o) JD
ACC NR: AP6010305

SOURCE CODE: UR/0136/66/000/003/0077/0079

AUTHOR: Marayev, S. Ye.; Mudrova, Ye. I.; Yelina, N. I.

ORG: none

TITLE: Mechanical properties and structure of zone-refined aluminum

SOURCE: Tsvetnyye metally, no. 3, 1966, 77-79

TOPIC TAGS: zone refining, aluminum zone refining, zone refined aluminum, aluminum mechanical property, aluminum structure

ABSTRACT: The mechanical properties and structure of cast and rolled, zone-refined aluminum (ZP) with a total impurity content of $5.4-14.5 \cdot 10^{-4}\%$, and AV0000-grade 99.996%-pure electrolytic aluminum have been investigated. 8.5-kg ingots were cold-rolled into strips 2, 0.5, or 0.05 mm thick and 180 mm wide. Strips 2 and 0.5 mm thick were rolled with kerosene lubricants, and strips 0.05 mm thick were rolled with aviation-gasoline lubricants. As-cast ZP aluminum had a tensile strength of 4.4 kg/mm^2 , a yield strength of 2.7 kg/mm^2 , an elongation of 65.3%, a reduction of area of about 100%, and a Brinell hardness of 14.1 kg/mm^2 . Corresponding figures for AV0000 aluminum were 4.2 kg/mm^2 , 1.9 kg/mm^2 , 46.3%, 87%, and 12.9 kg/mm^2 . The respective strength and elongation of as-rolled ZP aluminum varied, depending on the purity, from 3.2 to 4.0 kg/mm^2 and 1-4% at a thickness of 0.05 mm to $4.5-8.5 \text{ kg/mm}^2$ and 30-45% at a thickness of 2 mm. As-rolled AV0000 aluminum had a higher strength and a much lower

Card 1/2

UDC: 669.715:620.1

L 20644-66

ACC NR: AP6010305

elongation. Annealing of ZP aluminum at temperatures up to 300C had little or no effect on tensile strength; elongation markedly increased only in foil 0.05 mm thick. The tensile strength of rolled AV0000 aluminum dropped sharply and the elongation increased with increasing annealing temperature. ZP aluminum recrystallized completely at temperatures below 20C, while AV0000 aluminum preserved the structure of the cold-rolled metal at temperatures up to 150C. The rapid grain growth in both materials begins at temperatures above 250C. Orig. art. has: 4 figures. [AZ]

SUB CODE: 11, 13/ SUBM DATE: none/ OTH REF: 002/ ATD PRESS: 4226

Card 2/2 BK